orf3

sacG

sacC CAT

sacB

sacA

sacJ

sacl

tnp

tnp

sacH tnp

sacF

sacD

27 kb

7

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8

16

4

12

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9

8

isochorismatase Putative

Methytransferase

monooxygenase

Hydroxylase/

Putative glycosil Transferase

Putative aminopeptidase

Hypothetical protein

peptide synthetase

Non ribosomal

hydroxylase

derivative

L-Tyr

Tyr derivatives (P2)

Tyr derivatives

(P2)

Ala-Gly dipeptide Ala + Gly or

Putative regulator

PCT/GB2003/005563 10/540092 Safracin resistance protein Reductase Re A Adenylation Thiolation E Condensation

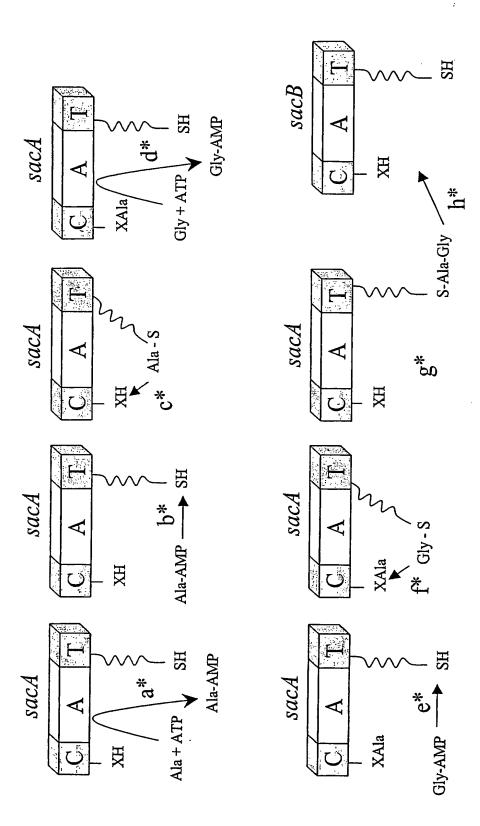
Figure 1

10/540092

Core			7	က	4	ĸ	9
Sequence	a a	LKAGGA	SGTTG	GELCIGG	TGD	RIELGEIE	rgghs
SafBl	97	-LYAGVVAVPVYP-7	8-YTSGSTADPKG-22	0-GEIWVRGPSVAQGY-2	3-LRTGDL-2	3-NYYPQDLEL-16	-LYAGVVAVPVYP-78-YTSGSTADPKG-220-GEIWVRGPSVAQGY-23-LRTGDL-23-NYYPQDLEL-163-LPDLGLDSLALVELKHRIE-
SafB2 1247	.247	-LEAGGVAVPLDP-6	4-YTSGSTGQPKG-17	12-GELFIGGAGVARGY-2	4-YRTGDL-2	3-FRIEFEEIE-12	-LEAGGVAVPLDP-64-YTSGSTGQPKG-172-GELFIGGAGVARGY-24-YRTGDL-23-FRIEFEEIE-121-FFDLGGNSLLATRLATRLA-
SafAl	559	-LKAGGAYVPLDP-64	4-YTSGSSGRPKG-17	3-GELFIGGSGVARGY-2	4-YRTGDL-2	3-YRIELAEIE-12	-LKAGGAYVPLDP-64-YTSGSSGRPKG-173-GELFIGGSGVARGY-24-YRTGDL-23-YRIELAEIE-121-FFELGGNSLLAGRLVEELD-
SafA2 1668	999	-LKAGGAYVPLDP-6"	7-YTSGSTGTPKA-17	9-GELFVGGVGLARGY-2	4-YRTGDL-2	3-YRVELGEIE-12	-LKAGGAYVPLDP-67-YTSGSTGTPKA-179-GELFVGGVGLARGY-24-YRTGDL-23-YRVELGEIE-122-FFEVGGTSLLLARLASRLL-
SacA	483	-MACGGSYVPLSD-6	3-FTSGSTGEPKG-17	2-GELIIHGHGVAQGY-2	0-YRTGDR-2	3-FRVELGPVQ-12	-MACGGSYVPLSD-63-FTSGSTGEPKG-172-GELIIHGHGVAQGY-20-YRTGDR-23-FRVELGPVQ-121-FLDIGGHSLSLTHLTGLLR-
SacB	524	-WQVGGIYVPLSK-6:	3-YTSGSTGKPKG-17	3-GELLICGPGVSQGY-2	2-YLTGDR-2	3-HRIELGEIE-12	-WQVGGIYVPLSK-63-YTSGSTGKPKG-173-GELLICGPGVSQGY-22-YLTGDR-23-HRIELGEIE-123-FFQLGGHSILVARMVERIE-
Sacc	515	-RAGHAFLPIDPR-62	2-YTSGSTGVPKG-17	8-GEIMLAGQNLARGY-2	1-YATGDL-2	3-HRIELNEVA-12	-RAGHAFLPIDPR-62-YTSGSTGVPKG-178-GEIMLAGONLARGY-21-YATGDL-23-HRIELNEVA-122-FFEQGGNSILLTRLAGTLS-
FUNCTION	Z	unknown	ATP binding	ATP binding	ATPase motif	ATP binding	4' phosphopantetheine binding

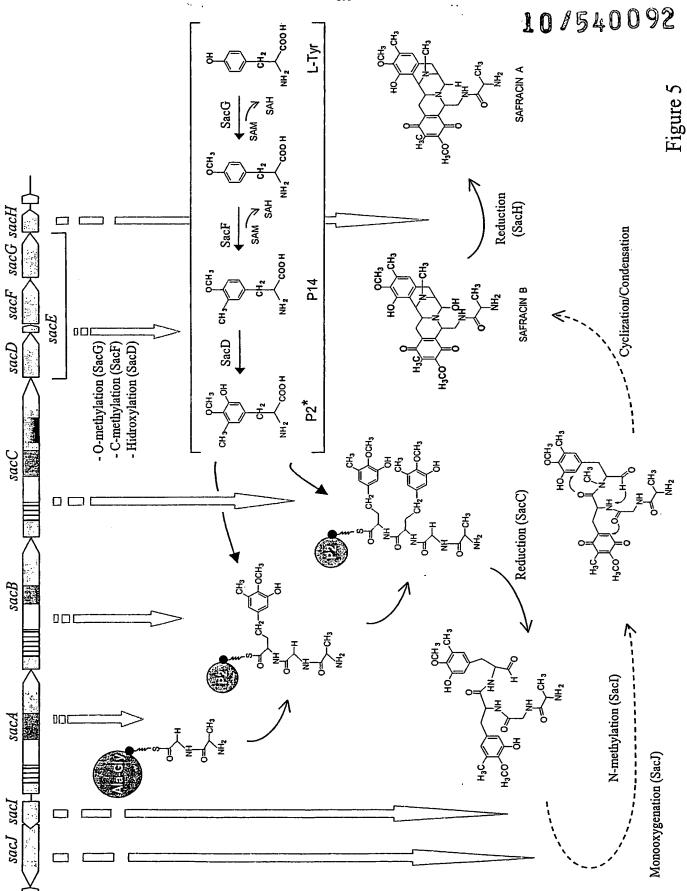
Figure



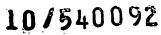


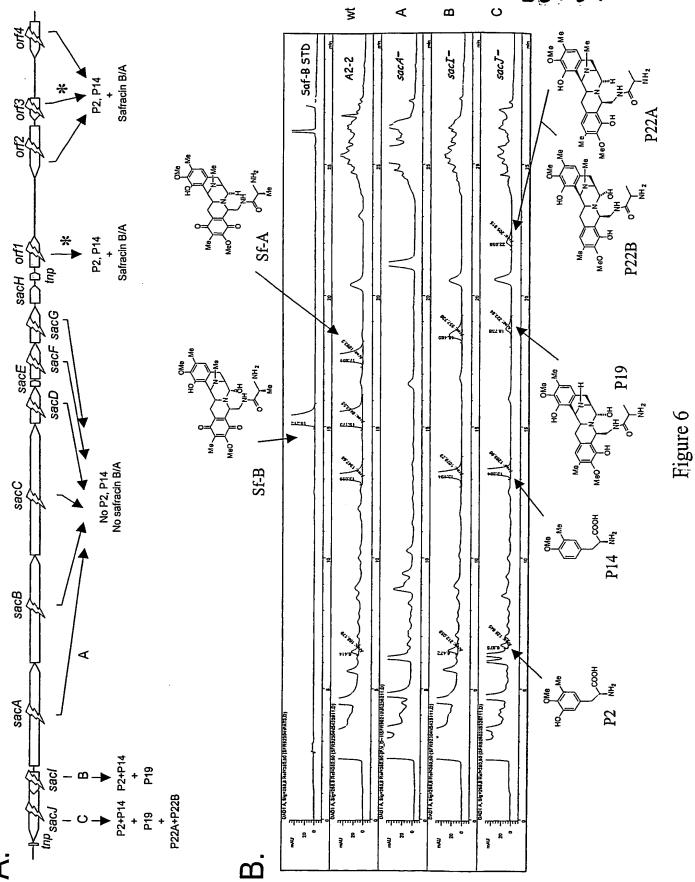
pB5H83 P2 sacCsacB Heterologous expression sacA Synthetic <u>ത</u>

Figure 4



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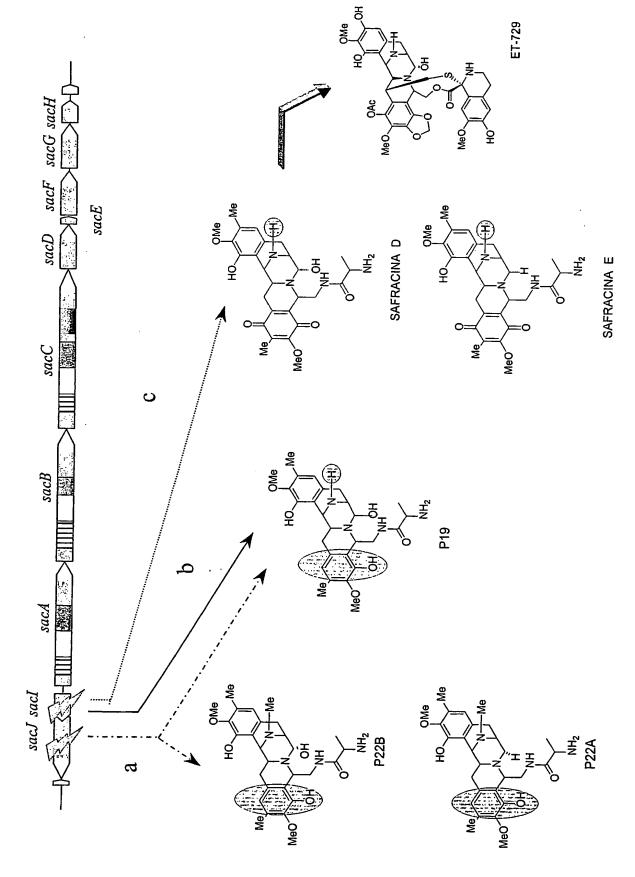


Figure 7

10/540092

Figure 8

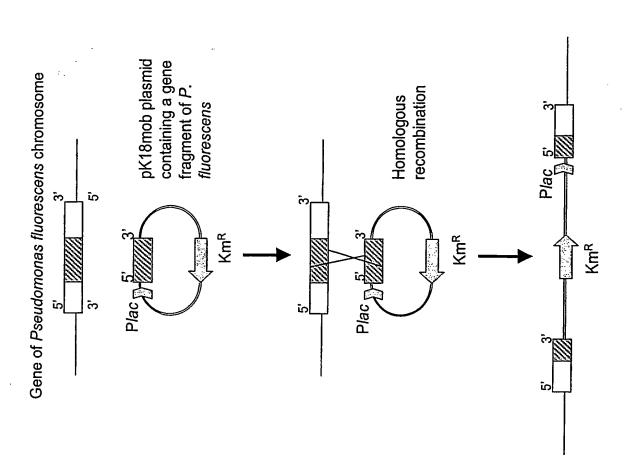


Figure 9